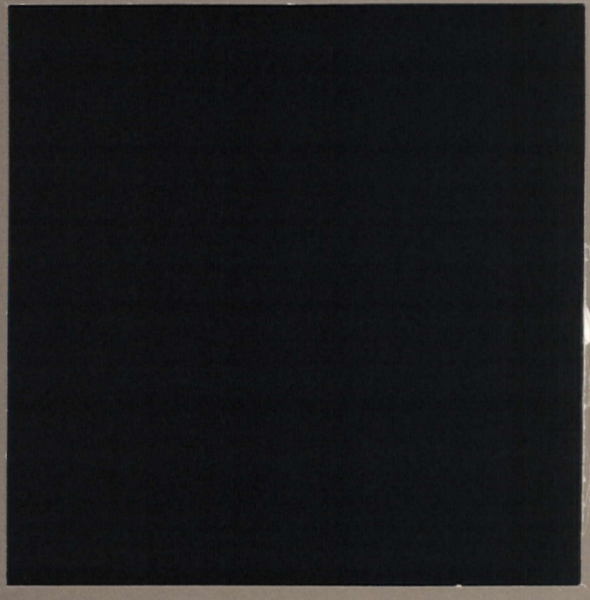
HW 1914

HAZARDOUS
SITE CONTROL
DIVISION

Remedial Planning/ Field Investigation Team (REM/FIT)

ZONE II



CONTRACT NO.
68-01-6692

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Ecology &
Environment

EPA

ecology and environment, inc.
108 SOUTH WASHINGTON, SUITE 302, SEATTLE, WASHINGTON 98104, TEL. 206-624-9537
International Specialists in the Environmental Sciences

HW 1914

PRELIMINARY SITE INSPECTION REPORT OF SPOKANE STEEL FOUNDRY COMPANY SPOKANE, WASHINGTON

TDD R10-8408-17

New copy has been revised for Old Inland Pit

Report Prepared By: Ecology and Environment, Inc.
Project Leader: Thomas A. Tobin
Date: February 22, 1985

Submitted To: J.E. Osborn, Regional Project Officer
Field Operations and Technical Support Branch
U.S. Environmental Protection Agency
Region X
Seattle, Washington

Received 5/25/85 Aff

ecology and environment, inc.
108 SOUTH WASHINGTON, SUITE 302, SEATTLE, WASHINGTON 98104, TEL. 206-624-9537
International Specialists in the Environmental Sciences

MEMORANDUM

DATE: March 5, 1985

TO: John Osborn, FIT RPO, USEPA, Region X

FROM: B. Ritthaler, E&E, Seattle BR

THRU: D. Buecker, FIT RPM, E&E, Seattle DAB

SUBJ: **Site Inspection Reports:**

o Spokane Steel Foundary - TDD R10-8408-17

Transmitted herewith are two copies of the aforementioned site inspection report for your review and distribution within EPA. If you have any questions please feel free to contact me directly.

BR:pc
Enclosure

ROUTING AND TRANSMITTAL SLIP

Date 3/25/85

TO: (Name, office symbol, room number, building, Agency/Post)	Initials	Date
1. John		
2.		
3.		
4.		
5.		

Action	File	Note and Return
Approval	For Clearance	Per Conversation
As Requested	For Correction	Prepare Reply
Circulate	For Your Information	See Me
Comment	Investigate	Signature
Coordination	Justify	

REMARKS

I reviewed the Spokane foundry report and except for a few misspellings it seems fine.

The results might indicate the need for further work.

Rene

DO NOT use this form as a RECORD of approvals, concurrences, disposals, clearances, and similar actions

FROM: (Name, org. symbol, Agency/Post)	Room No.—Bldg.
	Phone No.

5041-102

OPTIONAL FORM 41 (Rev. 7-76)
Prescribed by GSA
FPMR (41 CFR) 101-11.206

☆ U.S.G.P.O.: 1984-421-529/324

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PRELIMINARY
SITE INSPECTION REPORT

Spokane Steel Foundry Company
TDD R10-8408-17

Site Name/Address

Spokane Steel Foundry Company-Division of Spokane Industries
Box 3305
North 3808 Sullivan Road
Spokane, WA 99220

Spokane Industrial Park
Building 1 (Steel Foundry)
Spokane, WA 99216

Investigation Participants

Louis Craig, Ecology and Environment, Inc. (E&E), (206) 624-9537
Thomas A. Tobin, (E&E), (206) 624-9537
Flora J. Goldstein, Washington Department of Ecology (WDOE), (206) 459-6515

Principal Site Contacts

W. James Gurnea, Purchasing Manager, Spokane Steel Foundry Company, (509) 924-0440

Date of Inspection

August 29, 1984 1420 hrs. - 1700 hrs.

1.0 Introduction

Spokane Steel Foundry Company has been identified by the Region X Environmental Protection Agency (EPA) and Washington Department of Ecology (WDOE) from preliminary assessment screening as requiring additional information to accurately profile the nature and extent of past waste disposal activity at the site. Ecology and Environment, Inc. (E&E) has been requested by EPA under Technical Directive Document No. R10-8408-17 to conduct a site inspection and to evaluate the facility's status within the Agency's Uncontrolled Hazardous Waste Site Program. This report summarizes the results of E&E's preliminary site inspection and is divided into the following sections:

- Owner/Operator
- Physical Setting
- Site Description and Surrounding Area
- Topography and Drainage
- Geology/Hydrology
- Groundwater Use
- Climate

- o Foundry Operations Including Waste Type and Disposal Practices
- o Characterization of Waste Streams
- o Site Inspection by E&E
- o Sampling Program and Results
- o Conclusions

2.0 Owner/Operator

Spokane Steel Foundry Company (SSFC) is owned and operated by Spokane Industries, PO Box 3305, Spokane, WA 99220.

3.0 Physical Setting

Spokane Steel Foundry Company is located in Building 1, Spokane Industrial Park, North 3808 Sullivan Road, Spokane, WA 99216. The foundry is situated within Section 1, Township 25N, Range 44E; latitude 47° 41' 36.0", longitude 117°10' 52.5" (USGS Greenacres Quadrangle) (Figure 1) (1,2).

4.0 Site Description and Surrounding Area

The site covers approximately ten acres and consists of a single plant which houses the entire manufacturing process. These pprocesses include the raw materials storage area, the induction furnaces, the metals sanding operations, the casing shop areas, and the baghouse (Figure 2). Emission dusts and waste sand from the various processes are the main waste produced by the facility.

The Foundry is located east of the City of Spokane and is surrounded mainly by secondary agricultural land with some residences in the vicinity (<1/2 mile) of the park. Commercial and industrial establishments are located in the industrial park as well as in the surrounding area (3,4). It is estimated that the population within a one mile radius of the site is approximately 2,500 and greater than 10,000 within a three mile radius (2).

5.0 Topography and Drainage

The Spokane Industrial Park is located in relatively flat terrain (1-2%). In general, surface water runoff flows to Flora Creek approximately 1/2 mile south-southeast of the industrial park. Flora Creek eventually discharges into the Spokane River (2,4).

6.0 Geology and Hydrology

Spokane Steel Foundry is situated approximately 0.75 mile north of the Spokane River, and is situated over the Spokane Valley-Rathdrum Prairie Aquifer, designated as a "sole source" aquifer (6).

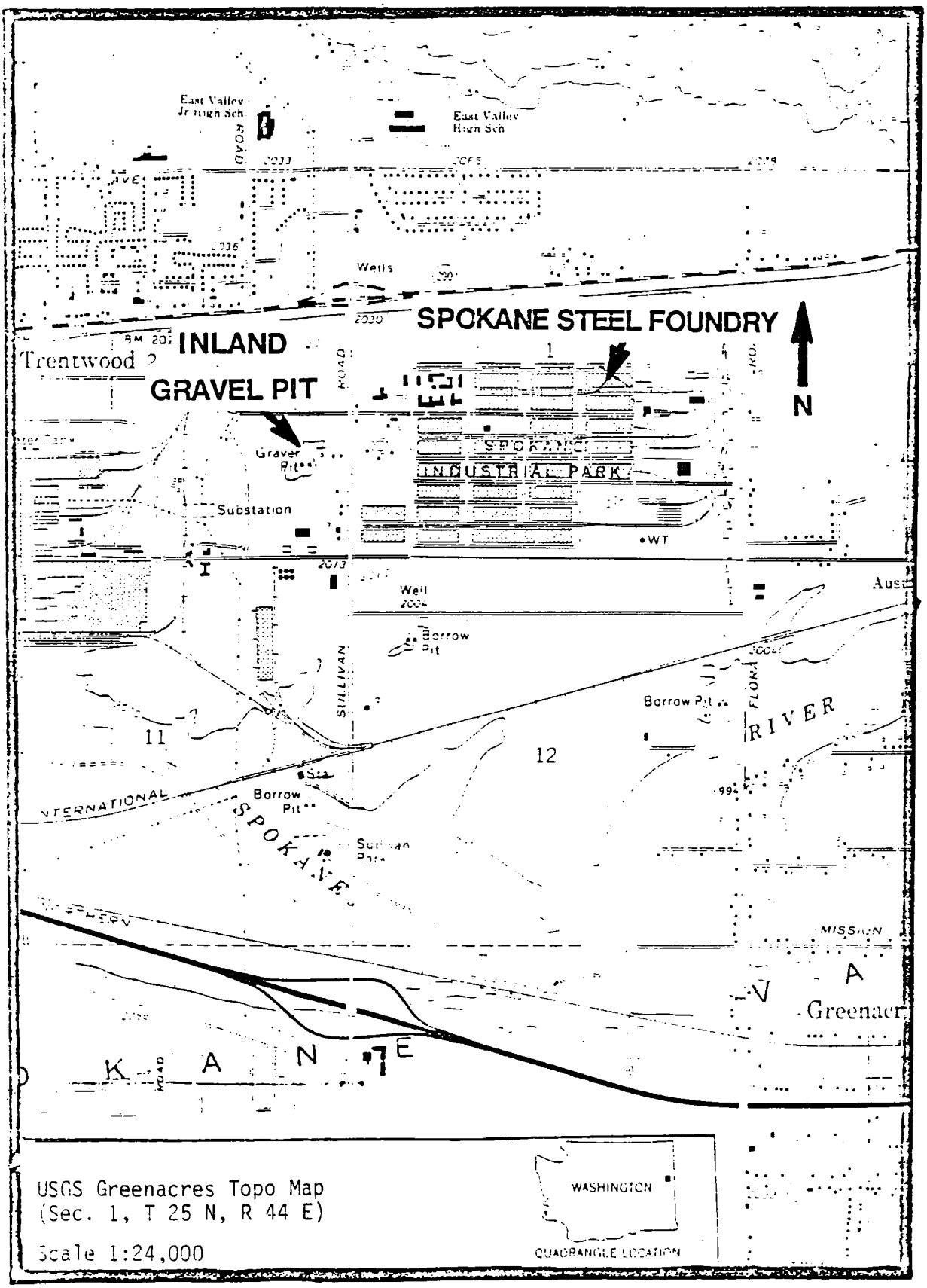

FIGURE 1
LOCATION MAP
SPOKANE STEEL FOUNDRY
SPOKANE, WASHINGTON

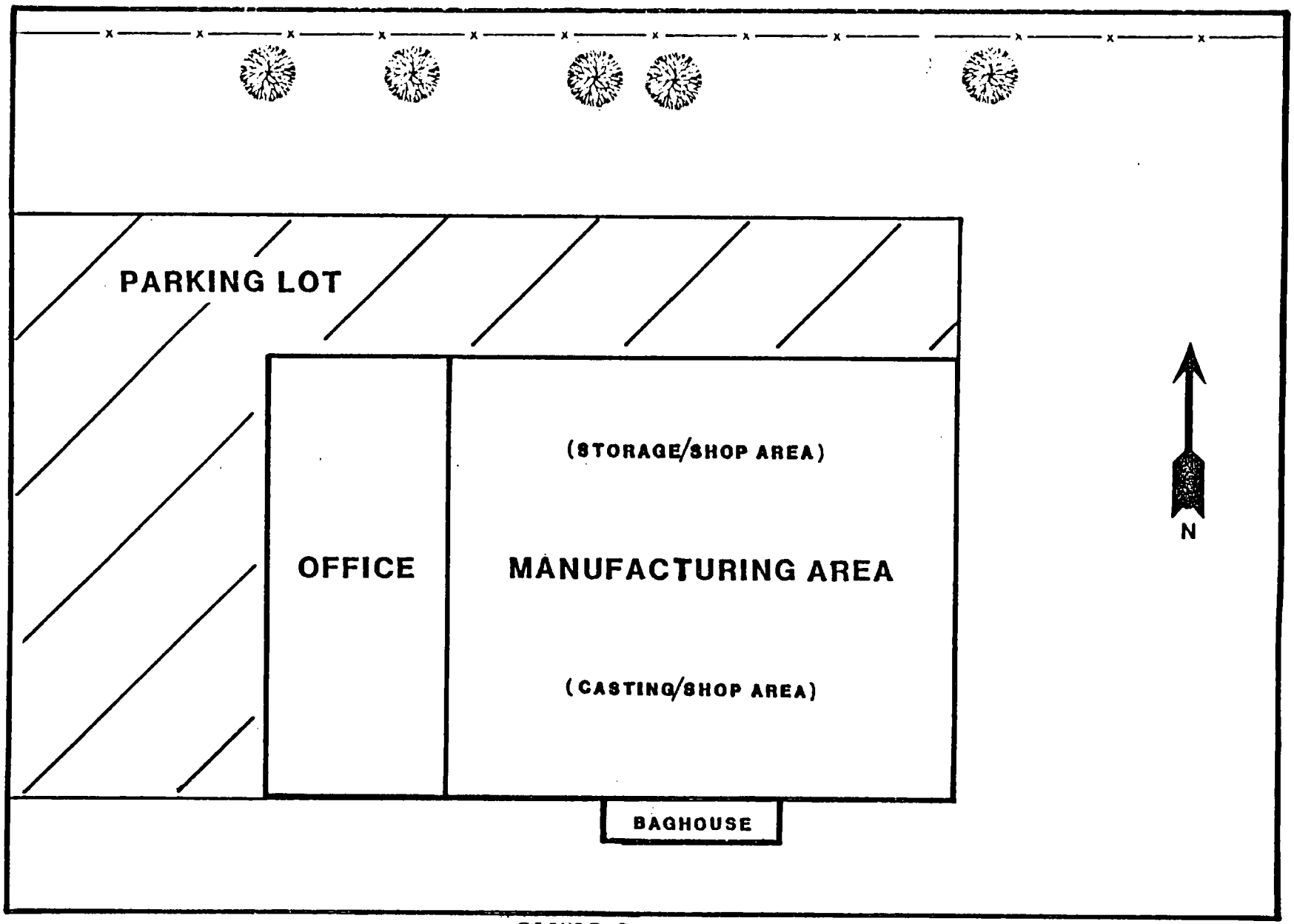

FIGURE 2
Spokane Steel Foundry
Building 1
Spokane Industrial Park
Spokane, WA

There is a limited hydrological information available on the site. In general, the lithology of area wells shows sands and gravels (Spokane Valley Gravels) from surface to approximately 150 feet; there are no apparent confining layers. Depth to groundwater is approximately 70 - 75 feet below ground surface (1). The Foundry obtains its water from the industrial park wells (6).

The surficial geology of the Spokane Steel Foundry suggests that the site is underlain by glaciolacustrine deposits. Such deposits are usually stratified and well sorted and are composed mostly of silt and sand with some clays and gravels. Regionally, groundwater flows to the west beneath the site and follows the general direction of the Spokane Valley (7-9).

7.0 Groundwater Use

Spokane Steel Foundry receives potable/industrial water from the four on-site Spokane Industrial Park wells that tap the Spokane-Rathdrum aquifer. The Trentwood and the Irvine Water Districts also have a number of groundwater wells within a 1/2 mile radius of the plant. Domestic wells are also located in the area of the foundry (1-3 miles). The wells are used for drinking water and for crop irrigation (1,4).

8.0 Climate

The Spokane area is characterized by a dry continental climate (10). The Spokane, Washington--Coeur d'Alene, Idaho area receives approximately 24 inches of total precipitation annually with a mean annual lake evaporation rate of 38 inches (8). Approximately 75% of the precipitation falls in the period October through March. Average maximum two-year, 24-hour rainfall is approximately 1.67 inches. The normal yearly average temperature is 47.5°s F.

9.0 Foundry Operations Including Waste Type and Disposal Practices

Spokane Steel Foundry has been in operation at its present location since 1965. The Company manufactures iron and steel parts for many diverse industries including manufacturers of heavy construction equipment, of oil field equipment, of aluminum refinery equipment, and of marine and defense equipment (6). They presently use four (4) baghouses to collect dust emissions from their processes. Two (2) baghouses collect emissions from two electric induction furnaces, one (1) baghouse collects emissions from the sand sieving operation, and one (1) baghouse collects emissions from the wheelabrator operation.

To manufacture iron and steel parts, raw iron or steel is melted down in the electric induction furnace which operates on the same principle as an arc welding device. The metal goes into the 3000°F furnace, is melted down, and is poured into molds to make the metal castings.

The furnace operates under vacuum pressure which evacuates the emission dust to either of two baghouses where it is collected into 55-gallon drums. Waste emission dust from the furnace consists of iron-chrome oxides and silicon oxide (i.e., glass oxide particles) (3).

The Company also operates a sand sieving operation. Coarse sand is filtered through a series of screens in order to produce the fine-grained sand needed for the casting molds. Additionally, sand is added to the melted metal in the furnace; the sand helps to maintain heat in the furnace and in the alloy metals added to the molten steel or iron. Sand and emission dust are the chief waste products from this process (3).

The final step in SSFC manufacturing process is to pass finished castings through the wheelabrator. The wheelabrator contains a mixture of sand and small steel balls that smooth the rough edges of the casted metal parts. A mixture containing metal particles and emission dust are the main waste products from the wheelabrator (3).

Table 1 describes the waste disposal practices utilized by Spokane Steel Foundary from 1965 to the present date.

TABLE 1 - SPOKANE STEEL FOUNDRY WASTE DISPOSAL PRACTICES (3)

Operational Period	Waste Type	Final Disposition
1965-1976	o Induction Furnace Iron and Chrome Oxides	- Vented into atmosphere
	o Induction Furnace Glass Oxide o Sand Sieving Operation Old Sand o Sand Sieving Operation Baghouse Emission Dust o Wheelabrator Sand and Metal Particles Mixture o Wheelabrator Baghouse Emission Dust	- Unknown
1976-1980	o Induction Furnace Iron and Chrome Oxides	- Inland Gravel Pit
	o Induction Furnace Glass Oxide o Sand Sieving Operation Old Sand o Sand Sieving Operation Baghouse Emission Dust o Wheelbrator Sand and Metal Particles Mixture o Wheelabrator Baghouse Emission Dust	- Mica Landfill, Spokane, WA

Table 1 continues

Table 1 Continued

Operational Period	Waste Type	Final Disposition
1980-present	o Induction Furnace Iron and Chrome Oxides	- Recycled into Induction Furnaces
	o Induction Furnace Glass Oxide	- Mica Landfill, Spokane, WA
	o Sand Sieving Operation Old Sand	- Mica Landfill, Spokane, WA
	o Sand Sieving Operation Baghouse Emission Dust	- Inland Gravel Pit
	o Wheelabrator Sand and Metal Particles Mixture	- Mica Landfill, Spokane WA
	o Wheelabrator Baghouse Emission Dust	- Mica Landfill, Spokane, WA

Between 1976 and 1980, Spokane Steel Foundry disposed of some of its waste into an abandoned gravel pit on North Sullivan Road and the rest to Mica Landfill, Spokane, WA. The 10 acre gravel pit is directly across from the industrial park on North Sullivan Road (Figure 1) and is located over the Spokane-Rathdrum Aquifer (1,3,4,11,12). The gravel pit, also known as the Inland Gravel Pit, was formerly owned by the Inland Asphalt Company. The pit is currently owned by Robert Carroll and James Etter of Spokane, WA (11). The site owners can be contacted through the pit property manager, John Ryan (509) 534-6531. Spokane Steel Foundry received permission from the Spokane County Health District on May 16, 1978 to dump emission dust into the pit (12). The Company indicated that there would be no environmental problems associated with the material. To date, the foundry has disposed of approximately 200 tons of dust into the pit (1,4).

10.0 Characterization of Waste Stream

Emission dust from the two electric industion furnaces consists of iron-chrome oxide dust along with glass oxide particles. The company fills approximately two-three 55-gallon drums per day with the iron-chrome oxide contaminated dust. The remaining emission wastes consist mostly of sand and glass oxide particles. Furnace emission dusts comprise about 10% of the waste produced by the company (13). Figure 3 describes the steel manufacturing process utilized by SSFC.

The majority of waste from the sand sieving operation is sand.

The waste from the wheelabrator operation is a mixture of and (95%) and pulverized steel (5%).

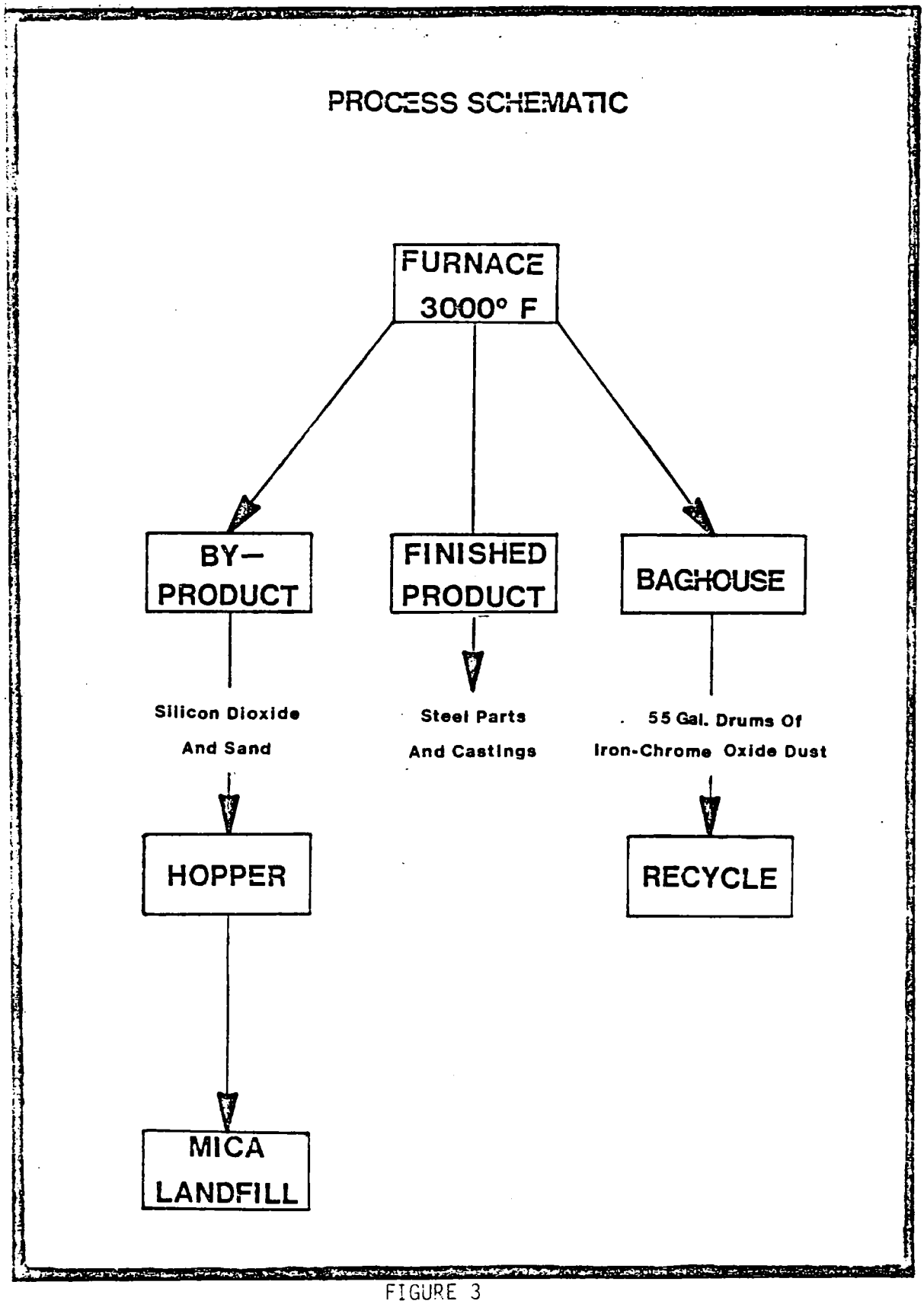

FIGURE 3
STEEL PROCESS SCHEMATIC
SPOKANE STEEL FOUNDRY
SPOKANE, WASHINGTON

11.0 Site Inspection by E&E

After reviewing the WDOE Eastern Regional site files, the inspectors drove to the Spokane Steel Foundry plant where they met with Mr. W. James Gurnea, Purchasing Manager for the Company. The site inspection began at 1400 hours. The inspectors explained the purpose of the site inspection. Mr. Gurnea provided the inspectors with a simplified sketch of the Company's steel operation (Figure 3) and with the following information

- Spokane Industrial Park was formerly owned by the U.S. Navy and was used as a military supply depot. The Navy sold the depot to the Washington Water Power Supply Company in 1960 which renovated the property for leasing purposes.

- The Kaiser Aluminum Company disposed of waste aluminum dross into the pit. According to J. Malm, WDOE, and J. Anicetti, Spokane County Health District (11,12), Kaiser dumped aluminum dross into the pit from the mid-1940s until approximately 1969 when they began to ship the waste to the Heglar-Kronquist pit (1969-1974) and to Mica Landfill (1974-present). In the mid-1970s Kaiser Aluminum voluntarily placed a clay cap over their wastes in the gravel pit.

After completing the interview, the inspectors viewed the baghouse area which is located on the south side of the foundry (Figure 2). One of the furnace baghouses, and both of the non-furnace baghouses, were in operation. The inspectors observed the furnace wastes being poured from the baghouse into a 55-gallon drum; small piles of the greyish dust were also observed on the ground beneath the baghouse. Emission dusts from the sand sieving operation and from the wheelabrator operation were being dumped into a large hopper. The area beneath these baghouses was also covered with a powdery grey dust.

At 1530 hours the inspectors left the plant and proceeded to the Inland gravel pit. Mr. Gurnea said the inspectors could inspect the site and collect samples. The 10 acre pit is approximately 35-50 feet deep and is surrounded by an 8-10 foot high chain link fence. A gate sign stated that with the exception of SSFC, Inland Asphalt Company, and General Pre-Mix Concrete Company no dumping was allowed in the pit. The sign also stated that the gate was to be locked at all times. The inspectors observed that the site gate was open and no lock could be found. During a perimeter walk of the pit the inspectors observed a small truck enter and dump material into the pit; closer inspection of this material suggested construction debris of clay tiles and sawdust.

The bottom of the gravel pit was relatively flat and covered with patches of grass, gravel and pieces of cement. There was no distinction between where Kaiser Aluminum dumped, and covered, their dross waste and where SSFC had been dumping its emission dusts in the past. Fresh piles of what was assumed to be SSFC emission dust were located at the eastern edge of the pit. These piles had the color and consistency of charcoal briquettes which were ground-up and were not covered. The inspectors did not observe any stains on the bottom of the pit that might have suggested that liquid wastes were being dumped into the pit. The inspection of the pit was completed by 1615 hours.

12.0 Sampling Program and Results

Washington Department of Ecology (WDOE) Baghouse Dust Sampling

On May 11, 1983, the WDOE sampled material from SSFC's four baghouses (2 furnace baghouses, the sand sieving operation baghouse, and the wheelabrator baghouse), and analyzed the samples for EP Toxicity parameters and for fish bioassay tests. Their results showed that the wastes from two furnaces were not EP toxic (Table 2), but did kill test fish after 96 hours (13). The dusts from the sand seiving operation and from the wheelabrator operation were neither EP Toxic, nor did they kill fish (14). One of the criteria that the WDOE uses for designating a substance as a hazardous waste is failing (i.e. the fish die) the 96-hour fish bioassay test (13).

E&E Inland Gravel Pit Sampling

E&E collected two soil samples from the Inland Gravel Pit on August 29, 1984. One composite soil sample was collected from the bottom of the pit and one composite soil sample was collected from one of the charcoal-gray waste piles (Figure 4). The samples collected by E&E were obtained from the following locations:

- SS1--pit bottom [from SW corner fence pole, go 240 feet North, then 120-130 feet East]
- SS2--charcoal grey waste pile [from SW corner fence pole, go 450 feet North, then approximately 300 feet East]

Transport blanks consisting of empty 8-oz. glass jars were returned to the appropriate contract laboratory with the samples. All samples, including the blanks, were analyzed for inorganic and organic contaminants listed as EPA priority pollutants (15).

All samples were collected in accordance with EPA/E&E Standard Operating Procedures for sampling including Chain-of-Custody, quality assurance, and sample packaging (16). A summary sample containers and sample documentation is presented in Appendix A.

E&E Sampling Results

Heavy Metals

Analytical results of detected heavy metals from samples collected within the Inland Gravel Pit are shown in Table 3. In general, the metal levels are similar in both samples with iron and aluminum at relatively higher levels than the other detected metals. Blank results are negligible compared to sample results.

Organic Compounds

Table 4 shows the concentration of organic priority pollutants detected in the soil samples from the gravel pit. Only sample (SS1), which was a composite sample collected from a 20' x 20' area, contained pesticide and base neutral/acid extractable compounds. Both samples collected were contaminated with volatile organic chemicals.

There were several additional compounds which were tentatively identified by gas chromatographic techniques in the samples from The Inland Gravel Pit (Table 5).

Table 2
EP Toxicity Test Results of Laboratory Analyses of Baghouse Emission Dusts Collected by the Washington Department of Ecology, May 11, 1983

Sample Location	Concentration in mg/l (ppm)							Concentration in ug/l	
	Arsenic	Barium	Cadmium	Chromium	Lead	Selenium	Silver	Arsenic (Total)	Selenium (Total)
Furnace Baghouse	0.0047	0.22	<0.01	<0.02	0.06	<0.0005	<0.02	2.0	<1.0
Furnace Baghouse	<0.0005	6.00	0.01	<0.02	0.02	0.0011	<0.02	<1.0	<1.0
Sandblaster Baghouse	0.0023	1.2	0.22	<0.02	1.8	0.0085	<0.02	1.0	10.0
Wheelabrator Baghouse	0.0058	1.0	0.14	0.05	0.12	0.0011	<0.02	6.0	3.0
EP Toxicity Standards (17)	5.0	100.0	1.0	5.0	5.0	1.0	5.0		

< - 'less than'

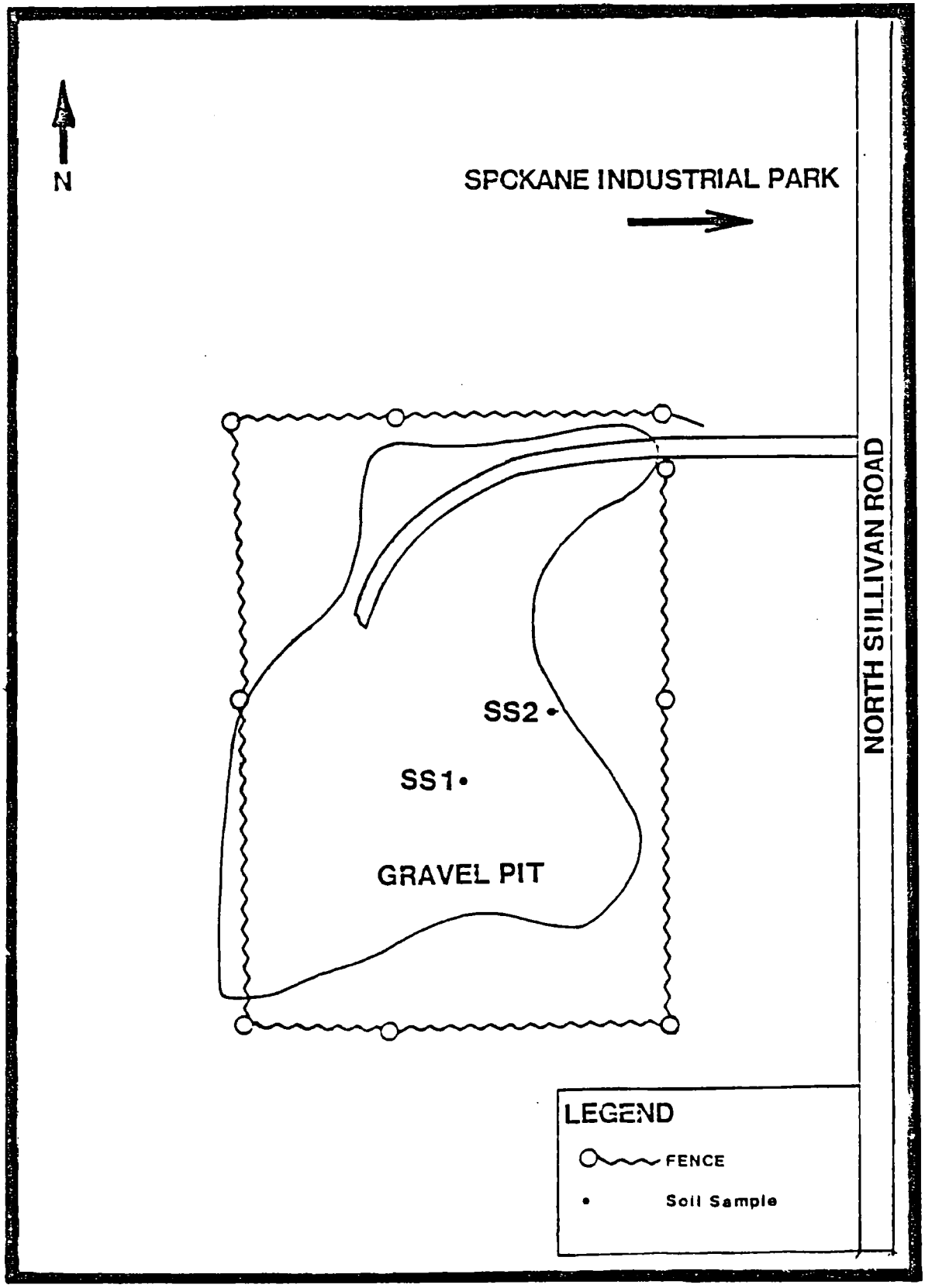

FIGURE 4
Sample Locations
Inland Gravel Pit
Spokane, WA

Table 3
Concentration of Heavy Metals Detected in Soil Samples
Collected From Inland Gravel Pit
by Ecology and Environment, Inc., 08/29/84
(Spokane Steel Foundry Company Wastes)

(Concentration in Milligrams per liter - mg/l)

Selected Heavy Metals	SS1	SS2	Blanks
Aluminum	4,460.0	9,470.0	14.2
Antimony	3.5	ND	ND
Arsenic	9.2	18.0	ND
Barium	397.0	778.0	ND
Beryllium	ND	0.49	ND
Cadmium	0.26	0.36	ND
Chromium	52.6	38.8	ND
Cobalt	3.6	ND	ND
Copper	145.0	112.0	ND
Iron	29,700.0	1,570.0	17.3
Lead	30.5	41.5	ND
Manganese	418.0	238.0	0.5
Nickel	36.4	42.2	ND
Silver	1.0	0.70	0.5
Zinc	63.4	86.0	0.8

ND - None Detected

Table 4
Concentration of Organic Priority Pollutants in Soil Samples Collected from Inland Gravel Pit by Ecology and Environment, Inc., 08/29/84
(Spokane Steel Foundry Company Wastes)

(Concentration in micrograms per kilogram, - ug/kg)

Selected Priority Pollutant	SS1	SS2	Blanks
Pesticides			
Chlorodane	8.0 J	ND	ND
Base-Neutral/Acid Extractible Compounds			
Phenol	590.0 J	ND	ND
Napthalene	400.0 J		
2-Methylnaphthalene	400.0 J		
bis (2-Ethylhexyl) Phthalate	400.0 J		
Volatiles			
Acetone	2,160.0	380.0	ND
Ethylbenzene	93.0	16.0 J	
Methylene chloride	1,830.0	1,360.0	
Toluene	625.0	244.0	
Trichloroethene	74.0	ND	
Total Xylenes	264.0	110.0	

J - Denotes 'estimated concentration'
ND - None Detected

Table 5
Tentatively Identified Compounds Detected in Soil Samples Collected from Inland Gravel Pit by Ecology and Environment, Inc., 08/29/84 (Spokane Steel Foundry Company Wastes)

(Estimated concentration in micrograms per kilogram, - ug/kg)

Compound Name	Compound Type	SS1	SS2
2-Methyldodecane	BNA	754.0	
Dodecane	BNA	1040.0	
Heptadecane	BNA	1740.0	
Heptadecane	BNA	1490.0	
Hexane	VOA		284.0
3-Methylpentane	VOA		239.0
2-Methylpentane	VOA		385.0
2-Propyl-1-heptanol	BNA	3709.0	
Phthalate	BNA	792.0	
1,1-Oxibisethane	VOA	274.0	
1,1,2-trichlo-1,2,2-trifluoroethane	VOA	435.0	
Pentane	VOA	153.0	
Methylcyclopentane	VOA	128.0	
2.3-Dimethylbutane	VOA	245.0	
2-Methylpentane	VOA	657.0	
Hexane	VOA	634.0	

BNA - Base-Neutral Extractable Organics
VOA - Volatile Organics

3.0 Conclusions

Based on the Site Inspection conducted by Ecology and Environment, Inc. of the Spokane Steel Foundry Company facility and on the Inland Gravel Pit, as well as a review of the sample data collected, it is concluded that:

- From 1976 to approximately 1980 emission dusts from SSFC induction furnaces were collected on-site and transported to the Inland Gravel Pit.
- As of 1980 wastes from the various facility's operations are segregated on-site and are taken to either the Mica Landfill or the Inland Gravel Pit.
- Two soil samples collected from the Inland Gravel Pit were contaminated with priority pollutant heavy metals and organic compounds.
- Organic compounds are not normally associated with these types of emission dusts.

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2. U.S. Geologic Survey (USGS), 1973, Greenacres Quadrangle: National Topographic Map Series, scale 1:24,000.

3. W. James Gurnea, 1984, personal communication, Purchasing Manager, Spokane Steel Foundry Company.

4. Ecology and Environment, Inc. (E&E), 1984, Spokane Steel Foundry Company site inspection.

5. CH2M Hill, 1982, Preliminary hydrogeologic study, North and South Landfills (Phase 1 report); available from the City of Spokane Solid Waste Division and from the US EPA.

6. Vollmer, Richard, 1985, personal communication, Vice President/General Manager, Spokane Industrial Park (509) 924-1720.

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12. Anicetti, John, 1985, personal communication, Spokane County Health District, (509) 456-6040.

13. Washington Department of Ecology (WDOE), 1982, Dangerous Waste Regulations, Chapter 173-303 WAC, pp 1-137.

14. Washington Department of Ecology (WDOE), 1983, Memo from James Malm (WDOE) to Gail Keyes (WDOE) concerning WDOE Recommendations on Spokane Steel Foundry Company.

15. U.S. Government Printing Office (GPO), 1974, Guidelines establishing test procedures for the analysis of pollutants; Proposed Regulations in Federal Register, v. 44, No. 233, pp. 69463-69575.

16. National Enforcement Investigations Center (NEIC), 1980, Enforcement considerations for evaluation of controlled hazardous waste disposal sites by contractors, EPA, Denver, CO.

17. American Public Health Association, 1980, Standard methods for the examination of water and wastewater (14th ed.).

APPENDIX A

SAMPLE DOCUMENTATION

APPENDIX A

Spokane Steel Foundry Company (Inland Gravel Pit) FI 10-8408-17
Case No.: 3184

Location Number	Latitude/ Longitude	STORET Station Number	Sample Containers	Date and Time	Custody Form Number	Sample Lab. Number	Sample Type (grab)	Means of Preser-vation	Analysis Requested	Destination
SS1	47°41'23" 117°11'52"		1 8-oz. jar w/ teflon lined septa	08/29/84 1624 hrs	EPA-X-91	J3359	soil	iced	PP organics	Laucks Lab Seattle, WA
			1 8-oz. jar w/ teflon lined septa	08/29/84 1624 hrs	EPA-X-91	MJ9009	soil	iced	heavy metals	US Testing Co. Hoboken, NJ
SS2	47°41'23" 117°11'52"		1 8-oz. jar w/ teflon lined septa	08/29/84 1642 hrs	EPA-X-91	J3358	soil	iced	PP organics	Laucks Lab Seattle, WA
			1 8-oz. jar w/ teflon lined septa	08/29/84 1642 hrs	EPA-X-91	MJ9008	soil	iced	heavy metals	US Testing Co. Hoboken, NJ
Transport Blank	N/A		1 8-oz. jar w/ teflon lined septa	08/31/84 1250 hrs	EPA-X-91	J3367	N/A	iced	PP organics	Laucks Lab Seattle, WA
			1 8-oz. jar w/ teflon lined septa	08/31/84 1250 hrs	EPA-X-91	MJ9007	N/A	iced	heavy metals	US Testing Co. Hoboken, NJ

APPENDIX B

PHOTOGRAPHIC DOCUMENTATION

PHOTO IDENTIFICATION SHEET

Type of Camera: Canon AE-1/3289855 TDD No.: R10-8408-17

Type of Film: ED 135-20/KR 135-20 Site Name: Inland Pit (Spokane Steel)

Frame No.	Roll No.	Date	Time	Taken By	Witnessed By	Description of Photo
23	1	8/29/84	1424	L. Craig	T.Tobin	West; Baghouse of Spokane Foundry
24	1	" "	1424	T.Tobin	L.Craig	West; Baghouse of Spokane Foundry
25	1	" "	1537	T.Tobin	L.Craig	West;General view of Inland Pit
26	1	" "	"	" "	" "	WSW; General view of Inland Pit
27	1	" "	"	" "	" "	SW; General view of Inland Pit
28	1	" "	"	" "	" "	S; General view of Inland Pit
29	1	" "	"	" "	" "	SSW; Piled debris around pit
30	1	" "	1542	" "	" "	NW; Pit foreground, General Electric background
31	1	" "	1545	" "	" "	NE; Pit area, General Electric background
32	1	" "	1550	" "	" "	N; Pit area, General Electric background
33	1	" "	1552	" "	" "	ESE, Piles of material on pit bottom
34	1	" "	1600	" "	" "	N; Material dumped in pit
35	1	" "	1630	" "	" "	NE; SSI sampling site
36	1	"	1636	" "	"	NE; SS2 sampling site

APPENDIX C

SITE INSPECTION FORM

USGS Greenacres Topographic Map
Spokane Steel Foundry: Sec. 1, T25N, R44E
Inland Asphalt Gravel Pit: Sec. 2, T.25N, R44E

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
WA	WAD 009069717

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Spokane Steel Foundry (Inland Gravel Pit)	Spokane Industrial Park, N. Sullivan Road				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 COUNTY**	**07 COUNTY CODE**	**08 CONG DIST**
Spokane	WA	99216	Spokane	063	05

09 COORDINATES LATITUDE 47 41 36.0 | LONGITUDE 117 10 52.5

10 TYPE OF OWNERSHIP (Check one)
☒ A. PRIVATE ☐ B. FEDERAL _____ ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER _____ ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION: 8 29 84 (MONTH DAY YEAR)

02 SITE STATUS: ☒ ACTIVE ☐ INACTIVE

03 YEARS OF OPERATION: 1965 (BEGINNING YEAR) | Present (ENDING YEAR) ___ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)
☐ A. EPA ☒ B. EPA CONTRACTOR Ecology & Environ. Inc. (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
☐ E. STATE ☐ F. STATE CONTRACTOR _____ (Name of firm) ☐ G. OTHER _____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Thomas A. Tobin	FIT Team	E&E	(206) 624-9537
09 OTHER INSPECTORS	**10 TITLE**	**11 ORGANIZATION**	**12 TELEPHONE NO.**
Louis Craig	FIT Team	E&E	(206) 624-9537
Flora J. Goldstein	Remedial Action Officer	WDOE	(206) 459-6515
			( )
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
W. James Gurnea	Purchasing Manager	Box 3304, Spokane WA 98220	(509) 924-0440
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	1400-1700	Sunny and warm

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Debbie Flood	U.S. Environmental Protection Agency	(206) 442-2722

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Thomas A. Tobin	EPA/FIT	E&E	(206) 624-9537	9 30 84 (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
WA	WAD 009069717

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☐ A. SOLID
- ☒ B. POWDER, FINES
- ☐ C. SLUDGE
- ☐ E. SLURRY
- ☐ F. LIQUID
- ☐ G. GAS
- ☐ O. OTHER _____ (Specify)

02 WASTE QUANTITY AT SITE
(Measures of waste quantities must be independent)

TONS 204
CUBIC YARDS _____
NO. OF DRUMS _____

03 WASTE CHARACTERISTICS (Check all that apply)

- ☒ A. TOXIC
- ☐ B. CORROSIVE
- ☐ C. RADIOACTIVE
- ☒ D. PERSISTENT
- ☐ E. SOLUBLE
- ☐ F. INFECTIOUS
- ☐ G. FLAMMABLE
- ☐ H. IGNITABLE
- ☐ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS	204	TN	Baghouse Dust (K061)

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
MES	Hexavalent Chromium	7440-47-3	LF	40.0	mg/kg
MES	Trivalent Chromium	7440-47-3	LF	1900.0	mg/kg
MES	Cadmium	7440-43-9	LF	0.22	mg/kg
MES	Selenium	7782-49-2	LF	10.0	mg/kg
MES	Lead	7439-92-1	LF	1.8	mg/kg

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

WDOE Eastern Regional Site Files; USEPA Site Files

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
WA	WAD 009069717

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 XX A. GROUNDWATER CONTAMINATION — 02 ☐ OBSERVED (DATE _____) — XX POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: >10,000 — 04 NARRATIVE DESCRIPTION

Spokane Foundry baghouse emission wastes were dumped in gravel pit formerly owned by Inland Asphalt Company (Spokane, WA). The gravel pit overlies the Spokane Valley - Rathdrum Prairie Aquifer, the sole source aquifer for City of Spokane, Depth to Aquifer is approximately 76-106 feet below ground surface.

01 XX B. SURFACE WATER CONTAMINATION — 02 ☐ OBSERVED (DATE _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

None reported or observed. Spokane River is the nearest surface water source and is located about 0.75 mile south of the gravel pit.

01 XX C. CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

None reported or observed.

01 XX D. FIRE/EXPLOSIVE CONDITIONS — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

None reported; no certified or documented threat.

01 XX E. DIRECT CONTACT — 02 ☐ OBSERVED (DATE _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

None reported. Gate to gravel pit area was unlocked and open. Access to pit area not monitored. Potential for direct contact with wastes in pit does exist.

01 XX F. CONTAMINATION OF SOIL — 02 ☐ OBSERVED (DATE: _____) — XX POTENTIAL — ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: 10 (Acres) — 04 NARRATIVE DESCRIPTION

Gravel pit received baghouse emission dusts which are fine powders. Samples collected by E&E (8/29/84) were contaminated with Priority Pollutant heavy metals and organics. Leachate from dusts could potentially contaminate the soils at the site.

01 XX G. DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — XX POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: >10,000 — 04 NARRATIVE DESCRIPTION

Gravel pit is unlined and overlies the sole source Spokane-Rathdrum Aquifer. Two water districts have wells within a three mile radius of pit. Potable/industrial wells are also located in the industrial park for park useage.

01 XX H. WORKER EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE _____) — ☐ POTENTIAL — ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

None reported. No workers are steadily employed at the pit.

01 XX I. POPULATION EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE _____) — XX POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: Unknown — 04 NARRATIVE DESCRIPTION

Gravel pit easily accessible; greatest potential for population exposure is from direct contact with wastes and/or blowing dust from pit.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
WA	WAD 009069717

II. HAZARDOUS CONDITIONS AND INCIDENTS (CONTINUED)

01 [XX] J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None reported or observed.

01 [XX] K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)

None reported or observed.

01 [XX] L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None reported.

01 [XX] M. UNSTABLE CONTAINMENT OF WASTES (Spills, Runoff, Standing liquids, Leaking drums) — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

None reported.

01 [XX] N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None reported or observed.

01 [XX] O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None reported or observed.

01 [XX] P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Observed dump truck enter site and dump a load of what looked like sawdust mixed with clay tiles (construction debris).

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

III. TOTAL POPULATION POTENTIALLY AFFECTED: >10,000

IV. COMMENTS

The above information in Part three pertains to the Inland gravel pit located on N. Sullivan Road directly west of the Spokane Industrial Park.

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Site Inspection (8/29/84) and WDOE Eastern Regional Office site files.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
WA	WAD 009069717

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS	NOT APPLICABLE TO GRAVEL PIT			
☐ F. SPCC PLAN				
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☐ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☐ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☐ F. LANDFILL		
☐ G. LANDFARM		
☒ H. OPEN DUMP	204	TN
☐ I. OTHER (Specify)		

04 TREATMENT (Check all that apply)
- ☐ A. INCENERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER (Specify)

05 OTHER
- ☒ A. BUILDINGS ON SITE

None

06 AREA OF SITE
10 (Acres)

07 COMMENTS
Gravel pit is an open dump. Baghouse emission wastes have been going into the site from 1968 from Spokane Steel. Kaiser Aluminium Co. also dumped aluminum dross into the gravel pit but discontinued this practice. Kaiser voluntarily capped their dross wastes with a clay layer. Dross is now sent to MICA Landfill. Kaiser used the pit from the 1940's until approximately 1969.

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)
☐ A. ADEQUATE, SECURE ☐ B. MODERATE ☒ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.
Gravel pit is unlined and overlies the sole source Spokane - Rathdrum Aquifer.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE ☒ YES ☐ NO

02 COMMENTS
Access to site not monitored and one can easily go down into pit area and the waste piles

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)
Site Inspection (8/29/84); WDOE Eastern Regional Site files.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
WA	WAD 009069717

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as appropriate)

	SURFACE	WELL
COMMUNITY	A. ☐	B. ☒
NON-COMMUNITY	C. ☐	D. ☒

02 STATUS

ENDANGERED	AFFECTED	MONITORED
A. ☐	B. ☐	C. ☒
D. ☐	E. ☐	F. ☐

03 DISTANCE TO SITE

A. ≥3.0 (mi)
B. 0.10 (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

☒ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) ☐ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER >10,000

03 DISTANCE TO NEAREST DRINKING WATER WELL _____ (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
74-106 (ft)	West	74-106 (ft)	>300x10^6 (gpd)	☒ YES ☐ NO

09 DESCRIPTION OF WELLS (Including usage, depth, and location relative to population and buildings)

There are four industrial wells in the Spokane Industrial Park as well as community potable water wells maintained by the Trentwood and Irvin Water Districts. The City of Spokane has drinking water production wells within three miles of the pit area.

10 RECHARGE AREA		11 DISCHARGE AREA	
☐ YES ☐ NO	COMMENTS	☒ YES ☐ NO	COMMENTS: USGS Greenacres Topo Map

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

☐ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☒ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☐ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	Potentially AFFECTED	DISTANCE TO SITE
Spokane River	☐	0.75 (mi)
	☐	(mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. >2,000 NO. OF PERSONS	B. >10,000 NO. OF PERSONS	C. >10,000 NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION

<1.0 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE

<2630

04 DISTANCE TO NEAREST OFF-SITE BUILDING

<3.0 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

Area surrounding gravel pit and Spokane Industrial Park is a mixture of residences and commerical/industrial establishments.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
WA	WAD 009069717

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☒ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☐ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☒ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH
300-500 (ft)	unknown (ft)	unknown

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
2.1 (in)	1.67 (in)	1-80 %	south	1-2 %

09 FLOOD POTENTIAL

SITE IS IN 100 YEAR FLOODPLAIN

10

☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE	OTHER
A. N/A (mi)	B. N/A (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

N/A (mi)

ENDANGERED SPECIES: _____

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AGRICULTURAL LANDS: AG LAND
A. < 1/4 (mi)	B. < 1 (mi)	C. _____ (mi)	D. N/A (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

Gravel pit is approximately 50 feet from top-bottom and is completely surrounded by a chain link fence. The area around the site is relatively flat with hills to the north (≅1 mile) and the Spokane River to the south (≅0.75 miles)

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sampling analysis, reports)

Site Inspection (8/29/84); WDOE Eastern Regional Site files; USGS Greenacres Topographic Map (1973 revised)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
WA	WAD 009069717

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER			
SURFACE WATER			
WASTE	one	EPA Contract Laboratory	OCT. '84
AIR			
RUNOFF			
SPILL			
SOIL/waste	one	EPA Contract Laboratory	OCT. '84
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
	N/A

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☒ GROUND ☐ AERIAL

02 IN CUSTODY OF USEPA (Region X)
(Name of organization or individual)

03 MAPS ☒ YES ☐ NO

04 LOCATION OF MAPS: USGS Topographic Map (Greenacres) - USEPA (Region X)

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

The Eastern WDOE Regional Office has collected samples of Spokane Steel Foundry's baghouse emission dusts (containing chromium, cadmium, selenium, lead). Bioassays on four samples of baghouse dust showed the dust to be toxic to fish (rainbow trout). Dust can be considered a dangerous waste (WDOE regulation) but are not considered to be EP toxic waste.

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

WDOE Eastern Regional Office site files; USEPA site files; E&E site inspection.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
WA	WAD 0097069717

II. CURRENT OWNER(S) / PARENT COMPANY (If applicable)

01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER
Contact: John Ryan (509)534-6581			
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE
for ownership information			
05 CITY / 06 STATE	07 ZIP CODE	12 CITY / 13 STATE	14 ZIP CODE
01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE
05 CITY / 06 STATE	07 ZIP CODE	12 CITY / 13 STATE	14 ZIP CODE
01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE
05 CITY / 06 STATE	07 ZIP CODE	12 CITY / 13 STATE	14 ZIP CODE
01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE
05 CITY / 06 STATE	07 ZIP CODE	12 CITY / 13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first) / IV. REALTY OWNER(S) (If applicable; list most recent first)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
Inland Asphalt Co.			
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
E. 6614 Main Street	1440		
05 CITY / 06 STATE	07 ZIP CODE	05 CITY / 06 STATE	07 ZIP CODE
Spokane / WA	99206		
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY / 06 STATE	07 ZIP CODE	05 CITY / 06 STATE	07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY / 06 STATE	07 ZIP CODE	05 CITY / 06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

WDOE Eastern Regional Site Files; Site Inspection (8/29/84).

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
WA	WAD 009069717

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER
Contact: John Ryan (509)534-6531	
03 STREET ADDRESS (P.O. Box, RFD #, etc.) for operator information	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME	11 D+B NUMBER
12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
14 CITY	15 STATE / 16 ZIP CODE

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

01 NAME	02 D+B NUMBER	10 NAME	11 D+B NUMBER
Unknown			
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	14 CITY	15 STATE / 16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD		
01 NAME	02 D+B NUMBER	10 NAME	11 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	14 CITY	15 STATE / 16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD		
01 NAME	02 D+B NUMBER	10 NAME	11 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	14 CITY	15 STATE / 16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD		

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

- Spokane Steel Foundry, Div. of Spokane Industries
  P.O. Box 3305, Spokane, WA 99220, Robert Tenold, V.P. and General Manager
- Site Inspection (8/29/84)
- WDOE Eastern Regional Site Files

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
WA	WAD 009069717

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
Spokane Steel Foundry	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
N. Sullivan Road	3300

05 CITY	06 STATE	07 ZIP CODE
Spokane	WA	99216

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
Unknown			
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
Spokane Steel Foundry			
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
N. Sullivan Road	3300		
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
Spokane	WA / 99216		
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

WDOE Eastern Regional site file

Site Inspection (8/29/84)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
WA	WAD 009069717

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ C. PERMANENT WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ D. SPILLED MATERIAL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ E. CONTAMINATED SOIL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ F. WASTE REPACKAGED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ G. WASTE DISPOSED ELSEWHERE — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ H. ON SITE BURIAL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ I. IN SITU CHEMICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ J. IN SITU BIOLOGICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ K. IN SITU PHYSICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ L. ENCAPSULATION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ M. EMERGENCY WASTE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ N. CUTOFF WALLS — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ P. CUTOFF TRENCHES/SUMP — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Q. SUBSURFACE CUTOFF WALL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
WA	WAD 009069717

II PAST RESPONSE ACTIVITIES *(Continued)*

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

N/A

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

N/A

III. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analysis, reports)*

WDOE Eastern Regional Office Site Files
Site Inspection (8/29/84)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
WA	WAD 009069717

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☒ YES ☐ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

Spokane Steel Foundry was required by the Eastern Regional Office of WDOE to submit information with regards to the Company's past waste disposal practices in the abandoned gravel pit and also to further evaluate the risk of baghouse emissions dust to groundwater. WDOE issued this Recommendation for Enforcement Action in August 1983; the Company responded in part to this request in October 1983.

III. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analysis, reports)*

WDOE Eastern Regional site files.

RENÉ

Site Inspection Guidance

Some Key Topics To Be Addressed During Site Inspections

Althouth not inclusive or necessarily applicable, think about these topics as you go through your inspection process.

A. Physical Site Information

1. Facility name
2. Facility location (town, AP#, county, state) (lat., long., map)
3. Owner of business operation
4. Owner of property/realty
5. Corporation information
6. History of ownership and operations; history of land use/zoning for site
7. Area of site (size, map)
8. Describe structures on site
9. Is site active now?
10. Land use/zoning around site
11. How near are residences?
12. What are closest buildings?
13. Present/future plans for site/ surrounding area
14. What water supplies/systems are in area
15. Septic tanks in area?
16. Are current/historical aerial photos available for area
17. How was site identified?
18. What is suspected hazard?
19. Easements
20. Utilities
21. Special studies in area (planning dept., ect.)
22. Nearest town

B. Products and Processes

1. SIC #
2. Type of operation - products/services
3. Major steps in process
4. Amounts of products (to check waste amounts)
5. Are waste products recycled?

C. Waste Generated, Quantity, Potential Toxicity

1. Waste products
2. Quantities of waste products
3. Percent in solid, liquid and sludge
4. Characteristics of waste: flammability, etc.
5. Methods of containment
6. Potential for harm to environment/public
7. Permits issued or applied for
8. If abandoned site: are sources known?
9. Is there a safety officer/health hydienist on site
10. Are records of sampling, monitoring of waste streams available

D. Waste Disposal, Treatment Methods/Effects

1. Type of waste activity: transport - where, who, how much
   storage
   treatment
   disposal

2. Methods of disposal (injection wells, ponds, drums, sewer, etc.) and wastes if known
3. Permits for disposal issued/denied/pending, federal, state, local sanitary district, manifests, etc.
4. Federal/state/local investigations and results
5. Security of disposal method/facility: area fenced
   unlined pond
6. Is disposal operation planned/designed by an engineering/consulting firm? Who?
7. Potential pathways for waste, e.g. leaking drums soaking into soil, kids playing in area

Environmental Factors

E. Archaeology/Historical Sites

1. Known locations of historical sites (map)
2. Archaeological digs done in area (map)
3. Sensitive areas (suspected or planned dig) (map)
4. Results of digs

F. Vegetation and Fauna

1. Vegetation types on/near site
2. Fauna types on/near site
3. Endangered species?
4. Wildlife habitat map
   - migratory patterns
   - breeding grounds and preserves
   - population density and diversity
5. Biologically sensitive areas
6. Cropping/forest stand patterns
7. Recreation areas
8. Records/accounts of biological stress
   - fish kills
   - stressed vegetation

G. Air Quality

1. Regional quality standards?

SOx	NOx	HC	Oxidants	Organics	Particulates

2. Site air quality (present and historical)

Station	Date	SOx	NOx	. . .
1	.	.	.	. . .
2	.	.	.	. . .

3. Map of air monitoring stations
4. Description of samplers
5. Contaminant plume distribution (map/graph)
6. Suspected source areas
7. Records of odor, complaints, air quality mgmt. district planning dept., chamber of commerce, etc.
8. Other sources that may be contributing to contaminant plume

H. Topography

Map of area showing:

drainage courses, waterways, ditches
depressions
elevations
slope, cliffs, cut embankments
erosion patterns
survey markers
physical barriers
natural boundaries